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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/084,773

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Paul Gothard Knutson

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09/28/2006

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EXAMINER

SHEPARD, JUSTIN E

ART UNIT

PAPER NUMBER

2623

DATE MAILED: 09/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/084,773

Applicant(s)

KNUTSON ET AL.

Examiner

Justin E. Shepard

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2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Response to Arguments***

Applicant's arguments filed 8/4/06 have been fully considered but they are not persuasive.

Page 5, second to last paragraph:

The applicant argues that the invention uses LEO and MEO satellites, while the cited references use geosynchronous satellites. As this limitation is not stated in the claims, it will not be considered.

Page 5, last paragraph:

The applicant argues that the first claim recites the limitation of "generating the transmit carrier offset frequency for the uplink transmitter from the integrator of the loop filter circuit of the carrier tracking loop of the demodulator." As this limitation is not stated in the claims, it will not be considered.

Page 6, second paragraph:

The applicant argues that the limitation of "the processed uplink signal to a satellite transmitting antenna when the downlink circuitry is frequency locked to signals from one of the first or second satellites," is not found in the cited art. The applicant admits that Saunders discloses that "after a common symbol transmit rate is established, the system of Saunders is ready to transmit the uplink channels to the satellite." Saunders also discloses that the "system clock frequency is generally locked

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to the symbol clock reference provided by the downlink beam.” This locking of the symbol clock is interpreted as being equivalent to frequency locking the uplink signal to the downlink signal from the satellite. The rejection stands.

Page 6, third paragraph:

The applicant argues that Godwin does not qualify as analogous art because it shows a satellite system with only downlink capabilities. Godwin is added to show that there are systems that use 2 satellite dishes, and that it would be obvious to use 2 of the satellites from Saunders. The combination is valid, and the rejection stands.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 6-9, 11-14, 16, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saunders in view of Godwin.

Referring to claim 1, Saunders discloses an outdoor unit for a satellite ground system comprising: downlink circuitry operative to receive satellite signals from a satellite (figure 1); and uplink circuitry operative to receive an uplink signal from the indoor unit (column 3, lines 49-52), process the received uplink signal, and provide the processed uplink signal to a satellite transmitting antenna (figure 2, part 254) when the

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downlink circuitry is frequency locked to signals from one of the satellite (column 6, lines 2-4).

Saunders does not disclose a system to process the first and second satellite television signals and provide the processed first and second satellite television signals to an indoor unit of the satellite television ground system.

Godwin discloses, in an analogous art, a system to process the first and second satellite television signals (column 4, lines 4-5) and provide the processed first and second satellite television signals to an indoor unit of the satellite television ground system (figure 4; column 3, lines 48-49).

At the time of the invention it would have been obvious for one of ordinary skill in the art to add the television broadcasting using multiple satellites, taught by Godwin, in the system disclosed by Saunders. The motivation would have been that using satellites to broadcast television is well known in the art, and using multiple satellites allows for more channels to be provided (Godwin: column 4, lines 6-7).

Note: Saunders does not disclose an outdoor or indoor units, but the units in the block diagram could be located indoors, outdoors, or some combination thereof.

Claims 6 and 11 are rejected on the same grounds as claim 1.

Referring to claim 2, Saunders discloses an outdoor unit of claim 1, wherein the uplink circuitry is further operative to receive an uplink control signal (column 4, lines 61-62) indicating a frequency locked condition to signals from one of the first or second satellites from the indoor unit (column 4, lines 25-31).

Claims 7 and 12 are rejected on the same grounds as claim 2.

Referring to claim 3, Saunders discloses an outdoor unit of claim 2, wherein the uplink control signal comprises an uplink data signal and an uplink oscillator signal (column 5, lines 37-38).

Claims 8 and 13 are rejected on the same grounds as claim 3.

Referring to claim 4, Saunders discloses an outdoor unit (24) of claim 3, wherein the uplink oscillator signal is derived from one of the first or second satellite television signals (column 5, lines 5-7).

Claims 9 and 14 are rejected on the same grounds as claim 4.

Referring to claim 16, Saunders discloses an outdoor unit of claim 7 where in the presence or the uplink data signal or uplink oscillator signal is required to enable the transmitter section or the outdoor unit (column 6, lines 6-9; figure 4c; Note: if the clocks are not synchronized the transmissions from will not be received correctly by the satellite, which is interpreted as being non-enabled).

Claim 17 is rejected on the same grounds as claim 16.

Claims 5, 10 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saunders in view of Godwin as applied to the claims above, and further in view of Kwentus.

Referring to claim 5, Saunders discloses a system wherein error correction is performed on the oscillator signal (figure 2, parts 214, 222, and 226).

Saunders and Godwin do not disclose an outdoor unit, wherein the uplink oscillator signal is derived from frequency conversion error data from one of the first or second satellite television signals.

Kwentus discloses, in an analogous art, an outdoor unit, wherein the uplink oscillator signal is derived from frequency conversion error data from one of the first or second satellite television signals (paragraph 46, lines 2-3 and 6-9).

At the time of the invention it would have been obvious for one of ordinary skill in the art to use frequency error data to synchronize the system clock, as taught by Kwentus, in the system disclosed by Saunders and Godwin. The motivation would have been that the more accurate the system clock is, the more accurately the uplink data will be transferred.

Claims 10 and 15 are rejected on the same grounds as claim 5.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin E. Shepard whose telephone number is (571) 272-5967. The examiner can normally be reached on 7:30-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Grant can be reached on (571) 272-7294. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JS



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